Name: Date: Score: / 6

# States of Matter: Reading Comprehension

Nonfiction: Science · about 270 words

Read the passage. Then answer each question. Circle the best answer or write your answer on the lines.

## States of Matter

Everything around you, from the air you breathe to the chair you sit on, is made of matter. Matter is anything that has mass and takes up space. On Earth, most matter exists in one of three states: solid, liquid, or gas.

All matter is made of tiny particles that are always moving. In a solid, such as an ice cube or a rock, the particles are packed tightly together and can only vibrate in place. That is why a solid keeps its own shape.

In a liquid, such as water or juice, the particles are close together but can slide past one another. A liquid has a definite volume, but it takes the shape of its container. Pour juice from a tall glass into a wide bowl, and the amount stays the same while the shape changes.

In a gas, such as the steam rising from a kettle, the particles move fast and spread far apart. A gas has no fixed shape or volume. It spreads out to fill whatever space it is in.

Adding or removing heat can change matter from one state to another. When ice absorbs heat, it melts into liquid water. If water is heated to 212 degrees Fahrenheit at sea level, it boils and evaporates into water vapor. When water vapor cools, it condenses into droplets, which is why a cold glass "sweats" on a hot day. When liquid water cools to 32 degrees Fahrenheit, it freezes into ice.

These changes are physical changes. The substance is still water, whether it is ice, liquid, or vapor. Only the arrangement and movement of its particles have changed.

1. **Main idea:** What is this passage mostly about?

   A. the three states of matter and how matter changes state  B. how to make juice  C. how kettles work  D. why ice is cold

2. **Detail:** How do particles move in a solid?

   A. They slide past one another.  B. They vibrate in place.  C. They spread far apart.  D. They do not move at all.

3. **Detail:** Which state takes the shape of its container but keeps the same volume?

   A. liquid  B. gas  C. none  D. solid

4. **Vocabulary:** In this passage, condenses means...

   A. changes from a solid to a liquid  B. changes from a gas into liquid droplets  C. spreads out  D. gets very hot

5. **Detail:** At what temperature does water boil at sea level?

   A. 212 degrees Fahrenheit  B. 100 degrees Fahrenheit  C. 32 degrees Fahrenheit  D. 0 degrees Fahrenheit

6. **Inference:** Why is melting ice a physical change, not a new substance?

**ANSWER KEY**

# States of Matter: Reading Comprehension (answers)

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   **It is still water; only the arrangement and movement of its particles change.**